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**PHASE 1 ARCHAEOLOGICAL IMPACT ASSESSMENT OF
PORTIONS 1 AND 2 OF ARCH ROCK 296, PLETTENBERG BAY**

Prepared for:

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INTRODUCTION

This report presents the results of a Phase 1 archaeological impact assessment undertaken on behalf of Grant Johnston Associates cc (Landscape Design and Environmental Planning) to assess the possibility that archaeological sites and material could be negatively impacted during the re-zoning and subdivision of Portions 1 and 2 of the property Arch Rock 296.

An archaeological impact assessment of this property is considered mandatory in terms of both the National Heritage Resources Act (Act No. 25 of 1999) and the Environmental Conservation Act (Act No 73 of 1989).

ARCHAEOLOGICAL BACKGROUND

The area under consideration lies above a cliff face which extends further eastward to include the important archaeological cave site of Matjies River Rock Shelter at Keurboomstrand. The rock shelter is situated in Table Mountain sandstone. Shell deposits in the shelter are over 10m deep and appear to have accumulated as a result of human occupation over the last 12 000 years. As with other coastal sites along the southern Cape, the cultural material includes bone tools, shell ornaments, ostrich eggshell beads and decorated fragments (Deacon 1979).

Although the intention of the sub-division and re-zoning of the property is to develop the area above the cliff face, it was considered essential to also assess the property for any signs of caves and shelters in the cliffs which might be negatively impacted by development. The discovery of previously unknown archaeological sites could shed light on human occupation during Holocene times.

RESEARCH METHODS

The area, which was surveyed (on the 24th and 25th of August 2004), is some 15 hectares in extent although a sizable part of the northern sections of Portions 1 and 2 consists of steep slopes and will remain undeveloped. The entire area is under thick plantations of blue gum and pine trees. The trees are at least 50 years old and thick undergrowth and pine needles make it virtually impossible to examine the soil. A number of rough access roads have been made through the trees. The area to the left (north) of the current gravel road was examined first. Then the newly bulldozed access roads to the right (south) were followed to the cleared areas above the cliff face (Figure 1). A large area of pine trees has been cleared for housing development. However the pines trees were still lying on the ground and it was not possible to determine whether there were any archaeological sites present. None were identified.

The cleared area, which was surveyed, was located at an elevation of 114m above sea level and at a GPS of:

S 33°59'59,8"

E 23°27'48,1"



View of the area which will be developed above the cliffs on the property Arch Rock.

In addition to surveying the area above the cliff face, a visit was also made to the base of the cliffs (southern sections of Portions 1 and 2 of Arch Rock). This area falls within the Arch Rock caravan park. A number of dwellings were found with their back walls against the cliff face. The vegetation was also extremely thick. While it is clearly possible that there may be shelters or caves in the cliffs, it was difficult to trace them in the available time.

RESULTS

While no archaeological sites were observed during the survey, a single dwelling was recorded to the left (north) of the gravel road, immediately on driving through the gate of Portion 1 of the property. The dwelling, which was probably that of a farm labourer or woodcutter, is small and fairly recent (last 20 years). It therefore is not protected by the National Heritage Resources Act. It is located at an elevation of 154m above sea level.

GPS
S 33°59'53,6"
E 23°27'36,4"



A small dwelling in the trees on Portion 1 of the property Arch Rock.

DISCUSSION OF RESULTS

A surface survey, undertaken on the property Arch Rock on the 24th and 25th August 2004, failed to locate an archaeological sites in the area above the cliff face. However, this may be partly accounted for by the extremely dense vegetation cover in the area which made it extremely difficult to cover the area effectively on foot.

At least one building, younger than 60 years, was identified. Since only buildings older than 60 years are protected by law (National Heritage Resources Act of 1999), no permit will be required to destroy this structure. No ruins were located during the survey but it is possible that such ruins may be found during the clearing of the vegetation on the hill.

While the cliff face is not targeted for development, nevertheless development above and below the cliff will result in increasing visitor numbers to the area. This may result in both local inhabitants and visitors exploring the cliff face. A cursory attempt was made during this survey to determine whether the cliff face contained caves or shelters which could contain archaeological remains. No such caves or shelters were detected from the base of the cliff. Contact was therefore made with Prof HJ Deacon, previously head of Archaeology at the University of Stellenbosch. Prof Deacon was involved in research at Matjies River Rock Shelter in the early 1990s and lived in the Arch Rock caravan park for extended periods each year. He confirms that he has checked the cliffs and did not find any shelters or signs of occupation (Deacon, HJ. pers.comm.).

ASSESSMENT OF SIGNIFICANCE AND POSSIBLE MITIGATION

The National Heritage Resources Act (No 25 of 1999) protects all archaeological sites and it is an offense to destroy, damage, excavate, alter, deface or disturb archaeological sites without a permit issued by the South African Heritage Resources Agency (SAHRA).

No archaeological sites were discovered and no mitigation is necessary.

RECOMMENDATIONS

It is recommended that development may proceed since there is no evidence of any archaeological sites above the cliff face. However, in view of the very dense vegetation cover, it is important to alert contractor to the possibility of uncovering the following archaeological sites/material during leveling of the soil for development:

- 1) Concentrations of stone tools
- 2) Shell middens
- 3) Human remains, including burials
- 4) Remains of earlier (European) stone structures

If any of the above is discovered, further development of the property must stop immediately and archaeologists as well as the South African Heritage Resources Agency should be contacted to determine the significance of the discovery.

TERMINOLOGY

Middens: are open-air shell accumulations which have resulted from human occupation in the area. Middens may measure between 1m and 20m in diameter. They consist primarily of shellfish but may also contain bone remains and cultural artifacts. They are the most common type of archaeological site found within 5km of the coast.

REFERENCES

Deacon, J. 1979. Guide to Archaeological sites in the Southern Cape. Prepared for the Southern African Association of Archaeologists excursion June 1979.

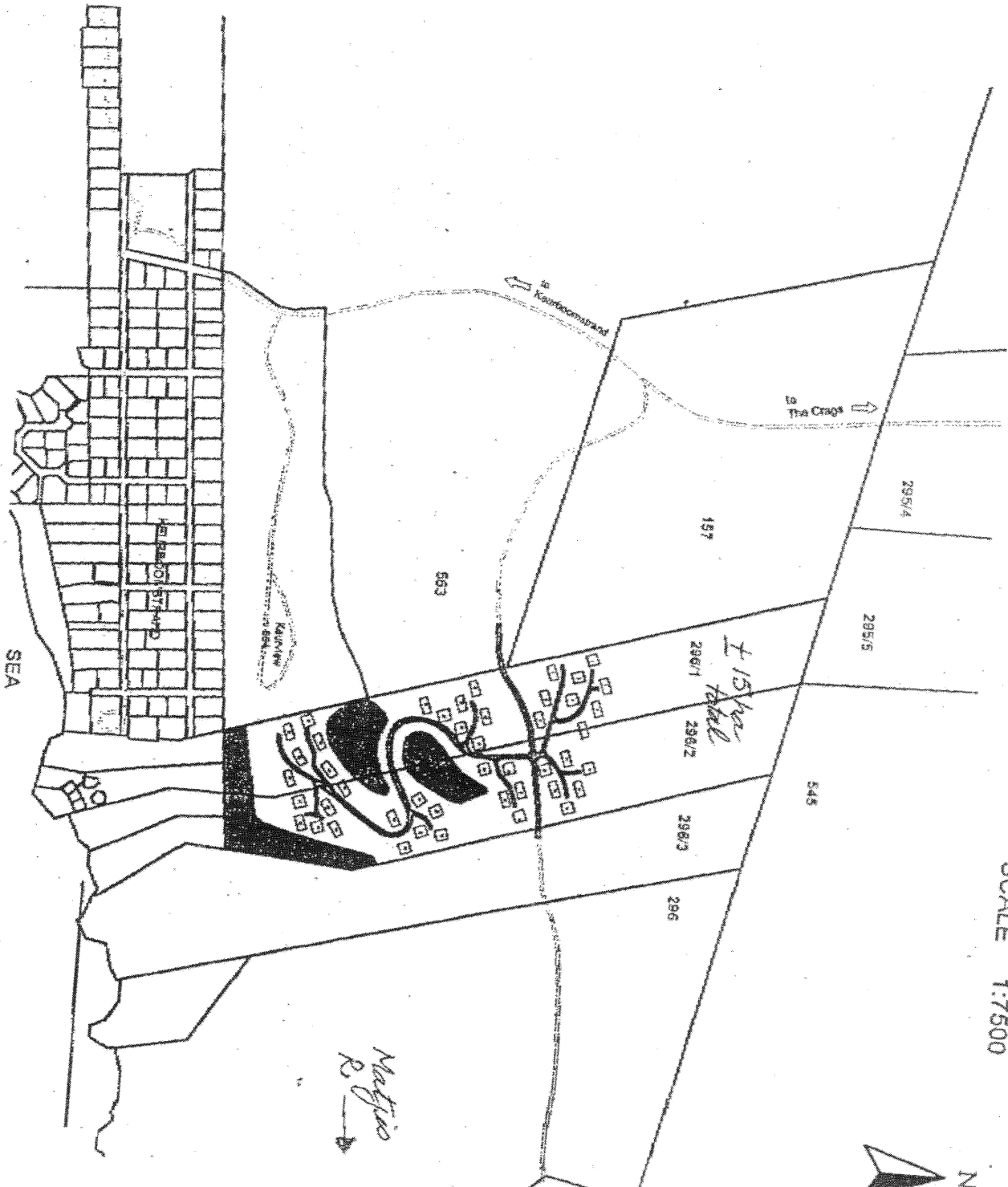


Figure 2: 1:7500 Locality Plan

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24 NOV 2004

**ADDO ELEPHANT NATIONAL PARK: CONSTRUCTION OF REST CAMP
AREA IN THE SOUTHERN SECTION OF PARK - PHASE 1
ARCHAEOLOGICAL IMPACT ASSESSMENT**

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INTRODUCTION

The Albany Museum was approached on 28 July 2003 to undertake an archaeological impact assessment of the construction of a rest camp in the southern section of the Addo Elephant National Park. The aim of the assessment was to identify any archaeological sites, which might be threatened with the construction of the rest camp, and to suggest possible mitigation. A further section of the southern access road, traveling northward to the northern fence of the farm Oliphants Plat 214, in the direction of Addo Heights, was also surveyed by vehicle. This section was not surveyed on the 10th June 2003.

1.1 Background

The terms of reference of this study were:-

1. To determine if any archaeological sites might be threatened by the construction of a new rest camp in the southern section (on the farm formerly known as Oliphants Plat 214) of the Greater Addo Elephant National Park.
2. To examine a further section of the southern access road through the farm Oliphants Plat 214 (see previous report).
3. In the event of sites being threatened, to suggest possible alternative routes.

1.2 Study Area

The study area involves a relatively small area in the southern section of the farm Oliphants Plat 214, now incorporated into the Greater Addo Elephant National Park, which will be cleared for the construction of a rest camp (a number of chalets). The author also traveled by vehicle along a section of the farm road as far as the northern boundary of the Oliphants Plat 214 farm (a distance of approximately 6-8 km). This road will be widened to form the southern access road into the Park.

1.3 Approach to study

A survey was undertaken on the 30 July 2003 in the company of Michelle Mathee of Vulka Environmental Management Services. We examined the ring road which has been constructed to link the various chalets at the new rest camp area. This road was covered on foot. The terms of reference did not include the survey of the sites for every chalet, but this was in the event not possible, as the bush had not been cleared in these areas.

The southern section of the new access road (through a portion of Oliphants Plat 214) follows the existing farm road for part of the way. During the previous survey, approximately 4 km was surveyed on foot and in a vehicle. The intention is to widen this existing farm road by approximately 1 m on either side. During the present survey, we were able to travel a further 6-8 km along the farm road, to the approximate farm boundaries of Oliphants Plat 214 and Peasland 212. We traveled along this section of the road in a vehicle but stopped on a number of occasions to examine gravel exposures on either side of the road.

2. OBSERVATIONS ON THE ARCHAEOLOGY OF THE AREA

A pilot survey in 2002 of the heritage sites in the Greater Addo Elephant National Park (GAENP) indicated the presence of an open Middle Stone Age site in a red gravel donga exposure, on the farm Glenmore on the Addo Heights (S 33.53460, E 25.82950). This site included a scatter of artifacts, mainly of quartzite and silcrete flakes and flaked cobbles. There was one possible Early Stone Age handaxe. The location of this site alerted archaeologists to the likelihood that further open sites might be located in the area to be bisected by the new access road.

There is also a reference in Illebenberger, Goedhart & Hattingh (1997) to an outcrop of calcereitized Cenozoic sediment on the farm Bosrijk 243, just north of Alexandria (S 33.61675; E 26.45008). The sediment contained fossil teeth, bone and MSA stone tools. A suggested date of 80 000 to 65 000 years has been proposed for the site. Interestingly, the bone has been identified as belonging to wildebeest, blesbok/bontebok, buffalo and an extinct ass-like zebra.

Early and Middle Stone Age (ESA and MSA) scatters are found on the banks of the Sundays River as well as the Bushman's River. These scatters are found immediately below the top soil, down to a depth of around 30 cm. They are therefore generally invisible, except on occasions when they are exposed in river cuttings and dongas. They appear to be randomly distributed in the top red gravels. The majority of artifacts consist of flaked quartzite cobbles (with cortex) and quartzite flakes. There are very few diagnostic flakes. The extent of the scatters suggests that they are widely distributed and it would appear that they are not *in situ*, but have been distributed by river action. These red gravels are part of the Kinkelbos Formation, which is part of the Algoa Group and these river terraces are geologically of recent origin (some 3 million years old).

3. RESULTS OF THE SURVEY

The proposed location for the rest camp consists of a vegetated area located on the side of a hill. Access has been supplied by a ring road and it was this road which was surveyed. No archaeological remains were found in the road.

However, there is a very large erosion donga running vertically down the slope, right next to the location of the new rest camp. This donga was reported in the previous report for Vuka (11 June 2003). The donga is located some 20 m from the camp. The top section of the donga, which runs to the crest of the hill, appears to consist of a calccrete capping. It would appear that the scatters of quartzite flakes are coming from the top of the hill and rolling down the slope.

3.1 Site 1

Near the end of the ring road, a small pathway (possibly a game track) leads straight up the hill. Some 5 m from the ring road, we found a large lump of shelly limestone (from the Alexandria formation which dates to around 12-5 million

years ago). This clump of limestone (Fig. 1) appears to contain a fossilized bivalve (shell). In discussions with Dr de Klerk (palaeontologist at the Albany Museum) it appears that there are many of fossilized marine remains in the Alexandria formation. He did not think that a palaeontological survey was required.

Near this limestone clump, we found a scatter of quartzite stone artifacts (Fig 2). They did not appear to be *in situ*, and seemed to have rolled down the hill. They are not threatened by the chalet development.

GPS: S 33.67245
E 25.80260

3.2 Site 2

The farm road (which will become the new access road into the Park), splits from the road to the rest camp at PI 9, and then runs to the right at an angle up the hill. It appears to cross a number of rocky ridges and red gravel deposits. These rocky ridges contain scatters of stone artifacts which appear to have been exposed by the construction of the farm road. One of these sites (Site 5) was identified in the previous report of the 11 June 2003.

One of these scatters contained a Middle Stone Age blade (see Fig 3).

GPS: S 33.67580
E 25.80718

3.3 Site 3

Once on the top of the hill, the farm road runs along on a level plain for several kilometers. We followed this road until the juncture of three farm roads. This appeared close to the border of the old farm fences of Oliphant Plat 214 and Peasland 212. At this stage the danger tape, indicating the access route, disappeared and we were unsure of the exact route.

There were no artifacts on this road with the exception of one spot where the road crossed a large donga. This donga sloped down significantly to the left and exposed large beds of red gravel. The gravel contained numerous quartzite stone artefact scatters (Fig 4).

GPS: S 33.67134
E 25.81239

4. IMPACT IDENTIFICATION AND ASSESSMENT

The National Heritage Resources Act (No 25 of 1999) protects all archaeological sites and it is an offense to destroy, damage, excavate, alter, deface or disturb archaeological sites without a permit issued by the South African Heritage Resources Agency (SAHRA).

It is important to note that permits are needed when sites are threatened by development. Where possible, arrangements should be made to conserve and protect sites of significance rather than allowing their destruction by development. Where this is not possible, mitigation must be arranged. Even ephemeral sites may have significance and should be sampled and recorded. A permit is needed for the destruction of a site if this is deemed necessary.

Previous surveys have shown that ESA and MSA scatters are distributed widely across the landscape between the Sundays and the Bushmen's Rivers. Any disturbance of the topsoil, man made or otherwise, seems to uncover random distributions of stone tools. It is clear that they are not *in situ*, and their location seems to be related to possible water action. It is therefore not possible to talk about 'sites' in the conventional (archaeological) sense of the word, as these distributions have no apparent beginning or end.

These scatters are not found in association with any bone, or other material remains. However, further east, towards Alexandria, MSA stone tools in association with fossilised bone remains have been found in the calcrete capping on top of the red gravel 'Kinkelbos Formation'.

The construction of the rest camp in the southern area of Oliphants Plaai 214 will not destroy these scatters as they are predominantly located on the top of ridges. Some stone tools have rolled down the slope (for example, at the large donga) but no scatters were found in the ring road. There seems to be no reason why the development of the rest camp cannot continue immediately.

It is intended that the current farm road through Oliphants Plaai 214 will be upgraded to form the southern access road into the Park. This will involve the widening of the road by approximately 1 m on either side. It is important to note that during the survey of approximately 6-8km of this road, a number of scatters of stone tools were found lying in the existing track. In other words, these sites had already been disturbed many years ago. It was not clear whether these scatters in the road were *in situ*, or derived from higher up on the hill slope. It seems pointless and expensive to re-route existing tracks that already cut through these stone tools scatters in order to avoid them. These scatters have little information potential, and since they cover such a large area, the loss of small areas that will be impacted by the road building, is not likely to be significant.

5. CONCLUSIONS

No archaeological remains of significance were discovered during the survey of the rest camp. Some scatters of stone artifacts are found in the next 6-8 km section of the southern access road which was surveyed on the 31 July 2003.

5.1 Rest Camp Development

It is recommended that the development of the rest camp may continue if the following guidelines are followed:

1. Every care should be taken during the bull dozing of the ring road to the chalets. Buried sites may be uncovered which were not visible during the survey. Sites such as graves, as well as stone artifacts together with fossilized bone, should be reported to SAHRA and the archaeologists at the Albany Museum immediately. It is important to make this clear to the driver of the bull-dozer so that he is alert to the possibility of buried archaeological remains.
2. The donga adjoining the rest camp should be monitored on a regular basis. Every effort should be made to stabilize it so that it does not offer a threat to the visitors.
3. Visitors to the rest camp should be alerted to the fact that the law protects archaeological remains, and they should be discouraged from collecting stone artifacts. This information could be made available in the form of a pamphlet.

5.2 Further 6-8 km of the southern access road

The archaeological scatters found in the farm road appear to be part of a large, random scatter of artifacts distributed widely across the landscape from the Sundays to the Bushmen's Rivers. These scatters are exposed on the banks of rivers and streams, in road cuttings and in dongas. It seems unlikely that any of these scatters are in primary context. They have been moved by water action, and their association no longer contains significant information. The majority of these remains are undiagnostic, and it is not clear whether they belong to the ESA or MSA or both. In some cases it is also possible that the split cobbles may be due to natural flaking in old river beds.

It is not necessary to re-route the first 8 km of the southern access road in order to avoid the tools in the road. These sites have already been exposed and disturbed by old farm roads. A new road would pose a greater threat to possible buried sites, than widening the existing road. It is my opinion that a permit would not be required to 'disturb' these remains.

7. REFERENCES

Cocks, M., de Klerk, W., Way-Jones, F. & Webley, L. 2002. Greater Addo Elephant National Park Cultural Mapping Pilot Project. *Albany Museum Internal Report: 90 pages.*

Fig. 1: Shelly limestone rock from the Alexandria Formation

Fig. 2: Stone tools from Site 1.

Fig. 3: An Middle Stone Age blade from Site 2.

Fig. 4: Stone tools in a donga (Site 3).



Fig. 1 : Shelly limestone rock from the Alexandria Formation

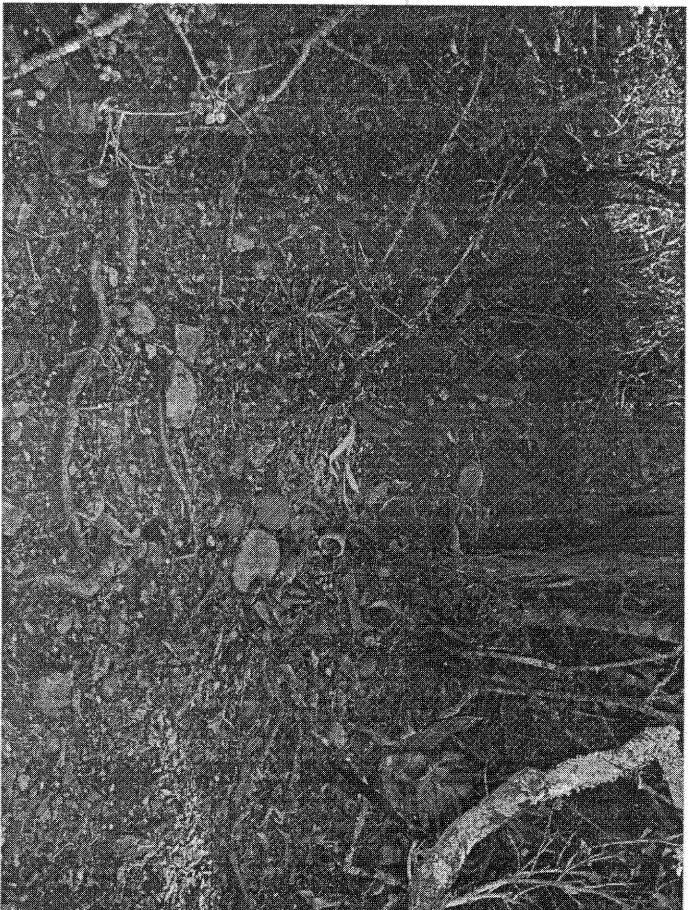


Fig. 2: Stone tools from Site 1.



Fig. 3: An Middle Stone Age blade from Site 2.

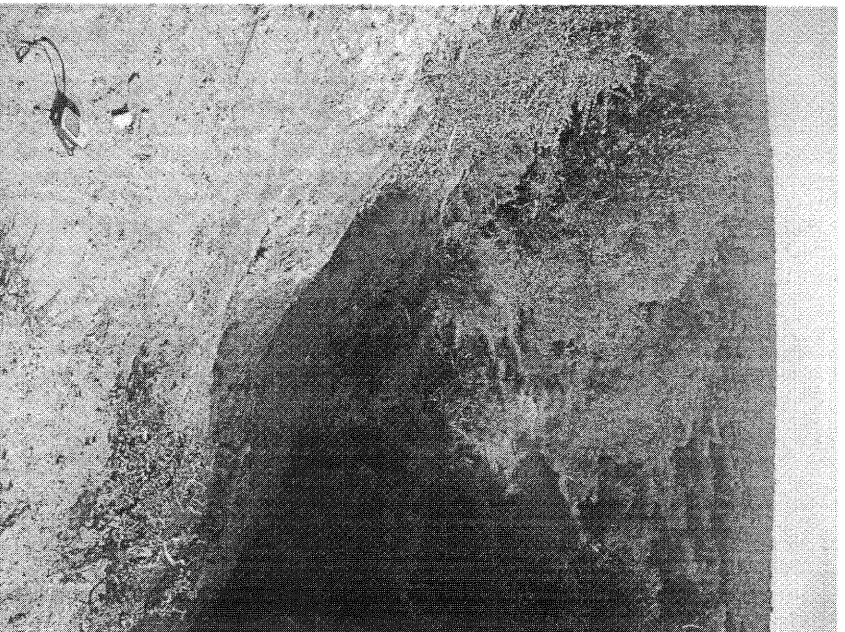


Fig. 4: Stone tools in a donga (Site 3).